

### Trend Study 17-55-05

Study site name: Lower Horse Ridge.

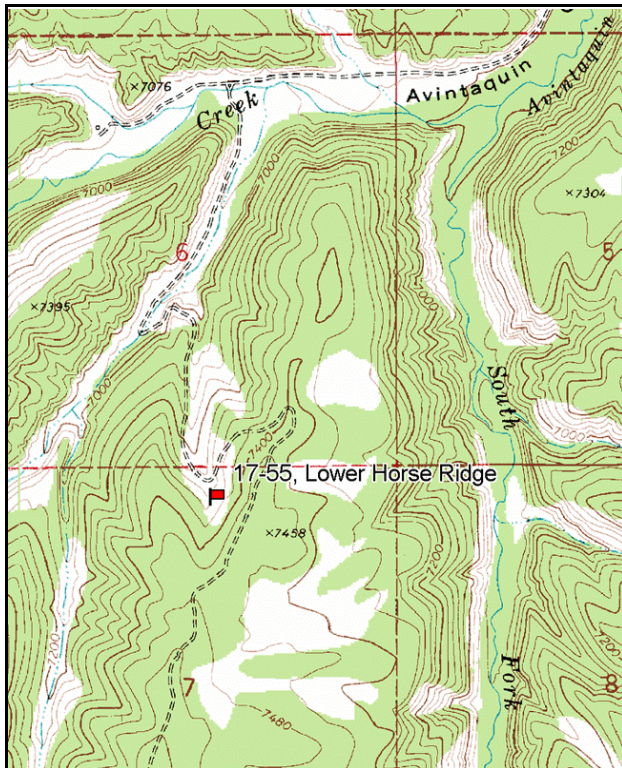
Vegetation type: Mountain Brush.

Compass bearing: frequency baseline 348 degrees magnetic.

Frequency belt placement: line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

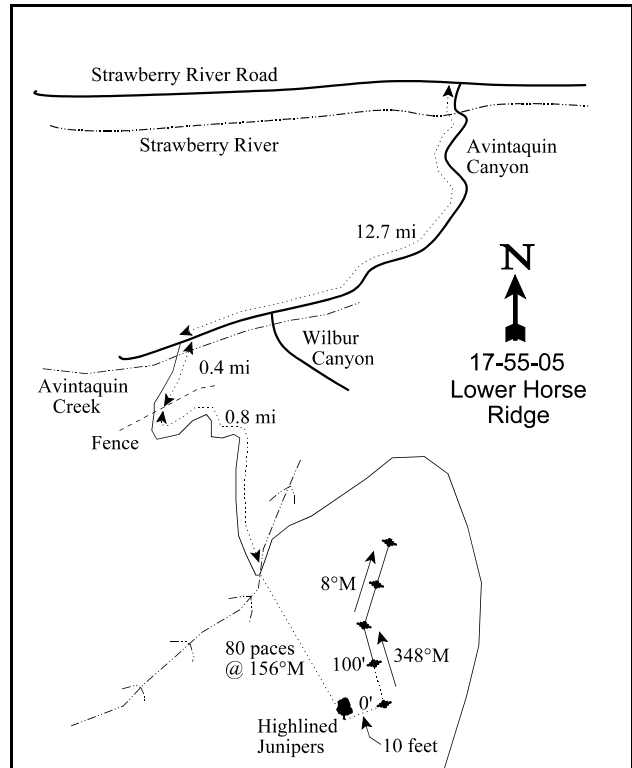
### LOCATION DESCRIPTION

From the Strawberry River Road, proceed south up Avintaquin Canyon 12.7 miles. Turn left here onto a road hidden in the trees and cross Avintaquin Creek. Go up Horse Ridge Canyon 0.4 miles to a fence. Continue up the ridge 0.8 miles to a sharp left bend in the road. From the bend and the gully bottom, walk 80 paces bearing 156°M towards a couple of highlined junipers. The 0-foot baseline stake is 10 feet away from one of the highlined junipers. The study stakes are green steel fenceposts 12 to 18 inches in height.



Map Name: Gray Head Peak

Township 6S, Range 8W, Section 7



Diagrammatic Sketch

GPS: NAD 27, UTM 12S 4425321 N, 514950 E

## DISCUSSION

### Lower Horse Ridge - Trend Study No. 17-55

The Lower Horse Ridge trend study is located on big game winter range near the north end of Horse Ridge at about 7,360 feet in elevation. The land is owned and managed by the Division of Wildlife Resources in the Avintaquin Wildlife Management Area. The range type is a mixed mountain brush on a west-southwest exposure with a 30% to 40% slope. Judging from the number of pellet groups observed, both past and present, along with the high level of browse utilization, this site is likely a winter concentration area for deer. Pellet group data in 2000 were estimated at 23 deer and 3 elk days use/acre (57 ddu/ha and 7 edu/ha). Pellet group data in 2005 were estimated at 34 deer and 11 elk days use/acre (83 ddu/ha and 26 edu/ha).

Soil is moderately deep with an effective rooting depth estimated at over 16 inches. The soil texture is a loam with considerable surface of limestone. Rock and pavement are concentrated on the surface between bunch grass and shrub interspaces. Rock and gravel are also distributed throughout the soil profile. Percent organic matter is fairly high at 4.9%. Phosphorus was measured at 2.8 ppm and values less than 6 ppm may limit normal plant growth and development in wildland soils (Tiedemann and Lopez 2004). Soil pedestalling and terracing are evident on the slopes, although there is little bare ground exposed and erosion is minimal. The erosion index measurement in 2005 was stable.

Several browse species occupy the site but the key species consist of true mountain mahogany and mountain big sagebrush. These two species provided 7% cover in 1995, 11% in 2000, and 12% in 2005. Mahogany has been consistently heavily utilized since 1982, yet the population appears stable with good recruitment of young (17-46%) and low decadence. The population density slowly increased to 1,640 plants/acre in 2000, and remained at 1,600 plants/acre in 2005. Vigor was poor on 30% of the population in 1982, although vigor had returned to normal by 2000. In 2005, decadence increased from 1% in 2000 to 13%. Utilization in 2005 was high with 84% of the population exhibiting heavy use.

Mountain big sagebrush provides additional preferred forage on this winter range. With the exception of the 1980s readings, sagebrush density has remained fairly stable at 1,040 plant/acre in 1995, 1,120 in 2000, and 980 in 2005. Since 1995, decadence has increased from 8% in 1995, to 25% in 2000, to 45% in 2005. The individuals classified as dying have followed a similar pattern with an increase from 2% of the population in 1995, to 11% in 2000, to 29% in 2005. With the increase in decadent and dying individuals, the young have decreased from 46% of the population in 1995, to 20% in 2000, to 8% in 2005. Previous to 2005 (and with the exception of 1982), utilization had been light. In 2005, utilization had increased to light to moderate. Plants with poor vigor, which include dying individuals, increased from 2% of the population in 1995, to 16% in 2000, to 31% in 2005.

Several other browse species occur including: serviceberry, dwarf rabbitbrush, mountain low rabbitbrush, white rubber rabbitbrush, snowberry, gray horsebrush, and broom snakeweed. A few Utah Rocky Mountain juniper and pinyon pine are scattered throughout the area. Point-center quarter data estimates from 2000 were 55 Utah juniper, 7 Rocky Mountain juniper, and 20 pinyon trees/acre. The average diameter of Utah juniper and pinyon was about 5 inches, while Rocky mountain juniper was 6 inches. Point-center quarter data estimates from 2005 were 41 pinyon trees/acre and 90 juniper trees/acre (Utah juniper and Rocky Mountain Juniper were not differentiated). The average diameter of pinyon was 4.6 inches and that of juniper was 6.0 inches.

The herbaceous understory is dominated by grasses which combined to produce 14% cover in 1995, 16% in 2000, and 11% in 2005. Bluebunch wheatgrass and Salina wildrye, provided 13% cover in 1995, 14% in 2000, and 9% in 2005. Forbs are diverse and moderately abundant with 21 perennial species encountered in 1995, 19 in 2000, and 24 in 2005. Combined, all forbs produced only 5% cover in 1995, 3% in 2000, and 5%

in 2005. Common species include: bastard toadflax, Indian paintbrush, and Pingue hymenoxys. The sum of nested frequency of perennial grasses and forbs decreased in 2000 due to drought, but increased slightly in 2005 because of increased precipitation.

#### 1982 APPARENT TREND ASSESSMENT

Soil condition was considered poor. Short of mechanical treatment and seeding, there is probably little that can be done to quickly arrest the poor condition. Vegetation trend also appears to be declining. The key species, with the possible exception of mountain big sagebrush, are almost certainly in trouble. Another area of potential concern is the abundance of undesirable increasers and the apparent juniper and pinyon encroachment.

#### 1988 TREND ASSESSMENT

Trend for soil is slightly up due to increased litter cover and a decline in percent bare ground. Eroding soil has been replaced by increased rock and pavement cover. Trend for browse is up. The 1982 report suggested that one of the key browse species, true mountain mahogany, was in a state of decline. The 1988 data indicate otherwise. It shows an increased density of both seedlings and young. Utilization is still moderate to heavy, but the average height of the mature plants increased from 20 to 30 inches and vigor has improved. Few mahogany have grown beyond browsing reach. Mountain big sagebrush has also increased in density and displays a more moderately hedged growth form. Trend for the herbaceous understory is up. Grass cover was good in 1982 and remains so in 1988 with an increase in overall quadrat frequency. The number of forb species encountered on the frequency baseline increased from 13 to 22 species and quadrat frequency increased 34%. Bastard toadflax remains the most abundant species.

#### TREND ASSESSMENT

soil - slightly up (+1)

browse - up (+2)

herbaceous understory - up (+2)

#### 1995 TREND ASSESSMENT

Trend for soil is considered stable. Percent bare ground declined slightly, although percent litter cover also decreased and frequency of grasses and forbs declined. The browse trend is stable for the key species, true mountain mahogany. There are no decadent plants and vigor is good. Heavy use increased from 47% in 1988 to 65% by 1995. Mahogany is very tolerant of heavy use. Recruitment of seedlings and young declined slightly but there are still sufficient numbers to maintain the population. Many mature plants are producing seed. Average height remains similar to 1988 estimates. Mountain big sagebrush also displays a stable trend with a decline in percent decadency from 14% to 8%. Use is light to moderate and vigor is generally good. One negative aspect to the sagebrush trend is the continued decline in height and crown of mature plants. Trend for the herbaceous understory is slightly down. Because grasses make up 75% of the herbaceous understory cover, overall trend is considered stable. Nested frequency of bluebunch wheatgrass and Salina wildrye increased significantly, while nested frequency of all other grasses declined. Sum of nested frequency for forbs declined by 26%. The Desirable Components Index rated this site as good with a score of 73 due to moderate browse cover, low decadency, and good perennial grass and forb cover.

#### TREND ASSESSMENT

soil - stable (0)

browse - stable (0)

herbaceous understory - slightly down (-1)

winter range condition (DC Index) - good (73) Mid-level Potential scale

#### 2000 TREND ASSESSMENT

Trend for soil is stable. Percent cover of bare ground has declined slightly while litter and vegetation cover increased slightly. The ratio of protective cover (vegetation, litter and cryptogams) to bare ground has remained almost unchanged. There is little erosion occurring on the site. Trend for the key browse species, true mountain mahogany, is also stable. Use is moderate to heavy, vigor is normal and decadence is only 1%. Young plants are common and account for 17% of the population. Mountain big sagebrush is of secondary importance. It also appears stable with a similar density compared to 1995. Use is light to moderate. Sagebrush does seem to be showing signs of stress due to drought however. Currently, 16% of the plants sampled were classified with poor vigor and percent decadence has increased from 8% to 25%. Trend for the herbaceous understory is down due to drought. Sum of nested frequency of perennial grasses and forbs has declined 31%. Three of the 4 most abundant perennial grasses have declined significantly in nested frequency since 1995. Many of the perennial forbs have also declined significantly in nested frequency. The Desirable Components Index rated this site as good with a score of 76 due to moderate browse cover, moderate decadency, and good perennial grass and forb cover.

#### TREND ASSESSMENT

soil - stable (0)

browse - stable (0)

herbaceous understory - down (-2)

winter range condition (DC Index) - good (76) Mid-level Potential scale

#### 2005 TREND ASSESSMENT

The trend for soil is stable. The ratio of protective ground cover (vegetation, litter and cryptogams) to bare ground changed little from 2000 to 2005. The trend for browse is stable. The key browse species mountain mahogany remained quite stable. Utilization increased from 35% heavy use in 2000 to 84% heavy use in 2005. Percent decadence increased from 1% in 2000 to 13% in 2005 and percent dying increased from no dying plants in 2000 to 5% in 2005. The percentage of young individuals to replace the dying increased from 17% to 21%, which is more than enough to compensate the 5% that are dying. Percent browse cover for mahogany increased from around 8% in 2000 to nearly 10% in 2005. The population of mountain big sagebrush, the other key browse species, decreased slightly in density. The decadence increased from 25% in 2000 to 45% in 2005 and the individuals classified as dying increased from 11% of the population to 29%. The young individuals decreased from 20% to 8%, not nearly enough to compensate for the increase in dying individuals. Utilization increased from 21% of the population exhibiting moderate use to 49%. The mountain big sagebrush is a smaller population than the mahogany and is utilized far less than the mountain mahogany, therefore has less impact on the overall browse trend. The trend for herbaceous understory is stable. The sum of nested frequency of perennial grasses remained unchanged, but perennial forbs increased nearly 24% from 2000 to 2005. The quadrat frequency of perennial species increased. Percent cover of perennial grasses decreased slightly, however percent cover can fluctuate greatly depending on precipitation levels and seasons. The Desirable Components Index rated this site as good with a score of 71 due to moderate browse cover, moderate decadency, and good perennial grass and forb cover.

# TREND ASSESSMENT

soil - stable (0)

browse - stable (0)

herbaceous understory - stable (0)

winter range condition (DC Index) - good (71) Mid-level Potential scale

## HERBACEOUS TRENDS --

Management unit 17 , Study no: 55

Type	Species	Nested Frequency				Average Cover %		
		'88	'95	'00	'05	'95	'00	'05
G	Agropyron spicatum	a219	c230	bc190	b173	7.10	11.46	6.67
G	Carex sp.	62	37	40	53	1.20	1.43	1.45
G	Elymus salina	a46	c140	b83	ab63	5.44	2.54	2.05
G	Oryzopsis hymenoides	b81	b49	a18	b48	.58	.29	1.15
G	Poa fendleriana	-	3	3	-	.03	.15	-
G	Poa secunda	b68	a2	a-	a-	.03	-	-
Total for Annual Grasses		0	0	0	0	0	0	0
Total for Perennial Grasses		476	461	334	337	14.40	15.88	11.35
Total for Grasses		476	461	334	337	14.40	15.88	11.35
F	Achillea millefolium	3	-	-	-	-	-	-
F	Androsace septentrionalis (a)	-	a2	a-	b15	.00	-	.22
F	Arabis sp.	-	6	2	5	.06	.00	.01
F	Aster chilensis	b86	a26	a13	a13	.31	.05	.07
F	Astragalus convallarius	a2	b15	a-	a2	.17	.00	.01
F	Astragalus purshii	1	3	-	2	.01	-	.00
F	Astragalus tenellus	4	-	-	-	-	-	-
F	Castilleja chromosa	b33	ab33	b44	a10	.51	.44	.08
F	Chenopodium leptophyllum(a)	-	5	-	1	.02	-	.00
F	Comandra pallida	b196	a137	a126	a132	1.49	1.00	2.45
F	Crepis acuminata	4	-	1	9	-	.00	.04
F	Cryptantha sp.	a9	ab26	a4	b32	.08	.06	.17
F	Cynoglossum officinale	-	-	-	2	-	-	.00
F	Delphinium nuttallianum	1	-	-	-	-	-	-
F	Descurainia pinnata (a)	-	b10	a-	ab1	.08	-	.00
F	Eriogonum alatum	a6	a1	ab13	b20	.03	.10	.58
F	Erigeron sp.	-	1	4	-	.00	.01	-
F	Haplopappus acaulis	b51	a16	a31	ab39	.32	.92	.70
F	Ipomopsis aggregata	4	-	-	1	-	-	.00
F	Lesquerella sp.	-	-	-	3	-	-	.15
F	Linum lewisii	a4	b24	a4	ab14	.12	.01	.15

T y p e	Species	Nested Frequency				Average Cover %		
		'88	'95	'00	'05	'95	'00	'05
F	Lithospermum sp.	c26	b18	ab7	a-	.26	.21	-
F	Machaeranthera canescens	b37	a6	a-	a1	.07	-	.00
F	Machaeranthera grindelioides	a14	b50	a17	a19	.71	.14	.34
F	Penstemon caespitosus	15	4	4	7	.02	.01	.02
F	Pedicularis centranthera	-	-	-	-	-	-	.03
F	Penstemon humilis	b25	b18	a2	ab9	.07	.03	.04
F	Phlox austromontana	c62	bc43	a7	ab22	.35	.09	.23
F	Phlox longifolia	-	5	4	5	.01	.01	.01
F	Potentilla gracilis	-	2	1	6	.00	.00	.04
F	Schoenocrambe linifolia	-	-	-	1	-	-	.00
F	Senecio multilobatus	b18	ab7	ab4	a3	.04	.01	.03
F	Taraxacum officinale	-	5	-	-	.03	-	-
F	Viguiera multiflora	3	-	-	-	-	-	-
Total for Annual Forbs		0	17	0	17	0.10	0	0.23
Total for Perennial Forbs		604	446	288	357	4.71	3.14	5.22
Total for Forbs		604	463	288	374	4.82	3.14	5.46

Values with different subscript letters are significantly different at alpha = 0.10

## BROWSE TRENDS --

Management unit 17 , Study no: 55

Type	Species	Strip Frequency			Average Cover %		
		'95	'00	'05	'95	'00	'05
B	Amelanchier utahensis	0	8	8	-	.48	.39
B	Artemisia frigida	1	0	0	-	-	-
B	Artemisia tridentata vaseyana	34	34	31	1.06	2.26	2.27
B	Cercocarpus montanus	47	53	46	5.57	8.43	9.76
B	Chrysothamnus depressus	21	11	13	.36	.54	.10
B	Chrysothamnus nauseosus hololeucus	1	3	3	-	-	.00
B	Chrysothamnus viscidiflorus lanceolatus	39	38	44	.84	1.58	.78
B	Eriogonum corymbosum	38	18	26	1.76	.53	.81
B	Gutierrezia sarothrae	56	18	63	1.14	.11	.84
B	Juniperus osteosperma	0	3	4	.30	.30	.66
B	Juniperus scopulorum	0	2	3	-	1.85	1.66
B	Pinus edulis	0	4	2	2.09	2.30	2.43
B	Rosa woodsii	0	4	2	-	.15	.03
B	Symphoricarpos oreophilus	3	8	8	.03	.44	.56
B	Tetradymia canescens	10	10	11	.09	.24	.18
Total for Browse		250	214	264	13.26	19.25	20.49

## CANOPY COVER, LINE INTERCEPT --

Management unit 17 , Study no: 55

Species	Percent Cover	
	'00	'05
Amelanchier utahensis	-	.53
Artemisia tridentata vaseyana	-	1.86
Cercocarpus montanus	-	12.13
Chrysothamnus depressus	-	.08
Chrysothamnus viscidiflorus lanceolatus	-	1.23
Eriogonum corymbosum	-	1.13
Gutierrezia sarothrae	-	.31
Juniperus osteosperma	1.60	.75
Juniperus scopulorum	-	2.13
Pinus edulis	2.00	3.16
Symphoricarpos oreophilus	-	.90
Tetradymia canescens	-	.43

KEY BROWSE ANNUAL LEADER GROWTH --  
Management unit 17 , Study no: 55

Species	Average leader growth (in)
	'05
Cercocarpus montanus	1.9

POINT-QUARTER TREE DATA --  
Management unit 17 , Study no: 55

Species	Trees per Acre	
	'00	'05
Juniperus osteosperma	62	90
Pinus edulis	20	41

Average diameter (in)	
'00	'05
5.0	6.0
4.7	4.6

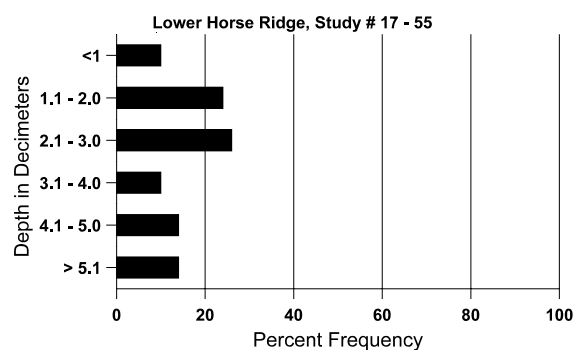
BASIC COVER --  
Management unit 17 , Study no: 55

Cover Type	Average Cover %				
	'82	'88	'95	'00	'05
Vegetation	7.00	6.00	34.53	37.02	33.81
Rock	3.75	7.75	11.69	6.51	6.90
Pavement	19.50	21.25	4.91	18.27	16.18
Litter	41.50	43.50	32.45	36.79	29.86
Cryptogams	0	0	.39	.01	.15
Bare Ground	28.25	21.50	18.20	16.13	25.62

SOIL ANALYSIS DATA --  
Herd Unit 17, Study # 55, Study Name: Lower Horse Ridge

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%OM	ppm P	ppm K	dS/m
16.3	58.8 (16.6)	7.3	27.3	46.2	26.6	4.9	2.8	336.0	1.8

## Stoniness Index





PELLET GROUP DATA --

Management unit 17 , Study no: 55

Type	Quadrat Frequency		
	'95	'00	'05
Rabbit	6	5	33
Elk	2	1	6
Deer	26	11	31
Cattle	-	-	1

Days use per acre (ha)	
'00	'05
-	-
3 (7)	11 (26)
23 (58)	34 (83)
-	-

BROWSE CHARACTERISTICS --

Management unit 17 , Study no: 55

		Age class distribution (plants per acre)					Utilization					
Y e a r	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
<b>Amelanchier utahensis</b>												
82	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
88	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
95	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
00	<b>480</b>	-	200	280	-	-	50	42	-	-	0	18/26
05	<b>420</b>	-	240	180	-	40	19	14	-	-	0	20/26
<b>Artemisia frigida</b>												
82	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
88	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
95	<b>40</b>	-	40	-	-	-	0	0	-	-	0	-/-
00	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
05	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
<b>Artemisia tridentata vaseyana</b>												
82	<b>532</b>	800	66	200	266	-	38	63	50	-	50	22/25
88	<b>1932</b>	-	1400	266	266	-	14	0	14	-	3	14/17
95	<b>1040</b>	20	480	480	80	400	13	6	8	2	2	11/16
00	<b>1120</b>	20	220	620	280	360	21	5	25	11	16	16/22
05	<b>980</b>	20	80	460	440	400	49	14	45	29	31	17/21
<b>Cercocarpus montanus</b>												
82	<b>666</b>	-	-	666	-	-	0	100	0	-	30	20/17
88	<b>1132</b>	200	466	666	-	-	53	47	0	-	12	30/23
95	<b>1360</b>	120	220	1140	-	-	28	65	0	-	0	30/33
00	<b>1640</b>	20	280	1340	20	60	27	35	1	-	0	43/37
05	<b>1600</b>	760	340	1060	200	20	10	84	13	5	5	42/40

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
<b>Chrysothamnus depressus</b>												
82	<b>0</b>	-	-	-	-	-	0	0	0	-	0	-/-
88	<b>465</b>	-	133	266	66	-	29	0	14	-	14	4/6
95	<b>900</b>	20	80	780	40	-	0	0	4	4	4	6/8
00	<b>440</b>	-	-	420	20	-	5	5	5	-	0	4/7
05	<b>660</b>	-	-	580	80	-	24	30	12	9	9	3/8
<b>Chrysothamnus nauseosus hololeucus</b>												
82	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
88	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
95	<b>40</b>	-	40	-	-	-	0	0	-	-	0	24/21
00	<b>60</b>	-	20	40	-	-	0	0	-	-	0	7/10
05	<b>140</b>	-	80	60	-	-	57	0	-	-	0	6/11
<b>Chrysothamnus viscidiflorus lanceolatus</b>												
82	<b>2865</b>	-	266	2066	533	-	14	2	19	-	16	10/11
88	<b>5933</b>	-	400	5000	533	-	13	1	9	-	7	9/9
95	<b>2520</b>	-	100	2420	-	-	0	0	0	-	0	11/13
00	<b>2160</b>	20	140	1820	200	-	0	0	9	-	0	10/11
05	<b>2300</b>	-	220	1940	140	20	3	0	6	3	3	10/11
<b>Eriogonum corymbosum</b>												
82	<b>399</b>	-	-	266	133	-	0	0	33	5	33	16/11
88	<b>932</b>	66	333	333	266	-	7	0	29	-	14	11/11
95	<b>1140</b>	-	300	820	20	-	12	0	2	-	0	12/16
00	<b>460</b>	-	20	340	100	-	22	22	22	4	4	14/18
05	<b>740</b>	160	40	560	140	20	5	3	19	11	11	11/15
<b>Gutierrezia sarothrae</b>												
82	<b>2599</b>	-	133	2466	-	-	0	0	0	-	0	8/10
88	<b>6132</b>	-	666	5133	333	-	0	0	5	-	0	6/4
95	<b>3600</b>	20	360	3240	-	20	0	0	0	-	0	9/9
00	<b>940</b>	-	220	720	-	-	0	0	0	-	0	4/4
05	<b>3760</b>	60	480	3220	60	-	2	0	2	-	0	6/6
<b>Juniperus osteosperma</b>												
82	<b>66</b>	-	66	-	-	-	0	0	-	-	0	-/-
88	<b>66</b>	66	66	-	-	-	100	0	-	-	0	-/-
95	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
00	<b>60</b>	-	60	-	-	-	0	0	-	-	0	-/-
05	<b>80</b>	-	20	60	-	-	0	0	-	-	0	-/-

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
<b>Juniperus scopulorum</b>												
82	<b>66</b>	-	-	66	-	-	0	0	-	-	0	67/45
88	<b>66</b>	-	-	66	-	-	100	0	-	-	0	122/35
95	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
00	<b>40</b>	-	-	40	-	-	0	0	-	-	0	-/-
05	<b>80</b>	-	20	60	-	-	0	0	-	-	0	-/-
<b>Pinus edulis</b>												
82	<b>66</b>	-	-	66	-	-	0	0	-	-	0	63/44
88	<b>66</b>	-	-	66	-	-	0	0	-	-	0	79/55
95	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
00	<b>80</b>	-	40	40	-	-	0	0	-	-	0	-/-
05	<b>60</b>	-	-	60	-	-	0	0	-	-	0	-/-
<b>Ribes sp.</b>												
82	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
88	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
95	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
00	<b>0</b>	-	-	-	-	-	0	0	-	-	0	-/-
05	<b>0</b>	20	-	-	-	-	0	0	-	-	0	24/24
<b>Rosa woodsii</b>												
82	<b>0</b>	-	-	-	-	-	0	0	0	-	0	-/-
88	<b>0</b>	-	-	-	-	-	0	0	0	-	0	-/-
95	<b>0</b>	-	-	-	-	-	0	0	0	-	0	-/-
00	<b>180</b>	-	20	160	-	-	0	0	0	-	0	19/29
05	<b>100</b>	-	-	60	40	40	0	0	40	20	20	19/13
<b>Symphoricarpos oreophilus</b>												
82	<b>199</b>	-	133	66	-	-	0	33	0	-	0	7/9
88	<b>399</b>	-	266	133	-	-	67	0	0	-	0	11/10
95	<b>60</b>	-	-	60	-	-	0	0	0	-	0	12/17
00	<b>320</b>	-	-	320	-	-	0	0	0	-	6	16/16
05	<b>400</b>	-	160	220	20	-	0	0	5	5	5	14/37
<b>Tetradymia canescens</b>												
82	<b>66</b>	-	-	-	66	-	0	100	100	-	0	-/-
88	<b>332</b>	-	266	66	-	-	20	0	0	-	0	6/10
95	<b>200</b>	-	40	160	-	-	10	0	0	-	0	9/11
00	<b>300</b>	-	80	140	80	-	0	13	27	7	7	10/9
05	<b>280</b>	-	40	160	80	-	7	21	29	14	14	9/11